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Spiesberger

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[54] **OCEAN ACOUSTIC TOMOGRAPHY**

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Related U.S. Application Data

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[51] **Int. Cl.**^{6} **G01V 1/00**

[52] **U.S. Cl.** **367/3**; 367/5; 367/6; 73/170.29

[58] **Field of Search** 367/3, 5, 6; 73/170.29

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[57] **ABSTRACT**

An acoustic tomography telemetry system and method allowing spatially averaged ocean temperatures to be measured in real-time. The system includes autonomous acoustic sources mounted on subsurface moorings and receivers that are either suspended from drifting surface buoys or cabled to shore. The telemetry method largely eliminates, in real-time, corruption of acoustic travel times due to wander of the source's mooring by shifting the start times of tomographic transmissions. Corrections to source wander are obtained without expending battery energy over and above that used in conventional tomography experiments. Standard techniques are used to correct clock errors at the source in real-time.

20 Claims, 7 Drawing Sheets